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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,911	12/21/2001	Richard T. Ida	1280.SCI1963ZC	9938

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EXAMINER

JACKSON JR, JEROME

ART UNIT	PAPER NUMBER
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2815

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/027,911

Applicant(s)

IDA ET AL.

Examiner

Jerome Jackson Jr.

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 and 7-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4 and 7-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 2815

Claims 2, 4, 16, are objected to because of the following informalities:

In claim 2 "fourth conductivity type junction" should apparently be --fourth conductivity type region--. In claim 4 "fentofarad" should be --femtofarad--. Claim 16 should depend from claim 15 rather than 14. In claim 18 "connectivity" should be --conductivity--.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 13, 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Dependent claims 8 and 13 recite what has already been recited in independent claim 2 "a first voltage reference node...junction", making the claim vague and indefinite. Claim 32 should apparently depend on claim 31 rather than claim 30 because there is no "common..." in claim 30.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-4, 7-10, 18-32, as best understood, are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Li '639.

The previous rejection still applies. The new recitations to claim 2 eliminate the 10 volt limitation and thus broaden the claim. Claim 2 does not distinguish over Li who shows thyristor structure with a low voltage Zener triggering structure. Other claims are likewise rejected as previously. New claims 30-32 are rejected because the limitations

Art Unit: 2815

"only through..." are considered obvious variants of the '639 structure. Elimination of the cathode p-well and anode n-well contacts is not considered patentable because rudimentary thyristor structure likewise does not have these contacts and it would not be a patentable step to remove the contacts in the '639 structure. Providing the contacts was an improvement in controlling the thyristor properties. Removing the well contacts in a Li structure is not a patentable step over Li. Li also teaches 5.5-7 volt turn on voltage.

Claims 2-4, 11-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Consiglio '047.

The previous rejection still applies. The new recitations merely consolidate certain claims and do not add patentable limitations. Likewise, in regard to claims 30-32, removing the contacts in Consiglio is not an invention over Consiglio. Consiglio teaches 7-8 volt Zener turn on voltage.

Applicant's arguments filed 7/14/03 have been fully considered but they are not persuasive. Applicant's arguments that the resistors are removed are unconvincing. By removing the ties applicant has effectively made the resistance so great that the anode is not connected to the base except through the emitter. Capacitance has not been lowered by removing the ties. The capacitance is a function of the depletion layer width and removal of a highly doped tie region will not lower capacitance. In any event the 35 USC 112 rejection has been removed. The prior art meets the claimed voltage and capacitance requirements. There is no evidence to the contrary.

Art Unit: 2815

Arguments that Li does not disclose a first voltage node connected to the first junction and a second node connected to the fourth junction is also unconvincing. See figure 2 of Li where V_A , the first voltage reference node, is connected to p+ region 126 which forms a junction with n region 134. Accordingly, the first voltage reference node is coupled to the first junction. Likewise the second voltage node V_C is connected to the fourth region 128 which forms a junction with p region 118. Applicant's arguments are unconvincing of patentability.

Arguments regarding Consiglio are likewise unconvincing. Consiglio shows a first voltage reference node V_{ss} connected to n region 70 which forms a junction with p well 66, and second voltage reference node V_{dd} connected to p region 64 which forms a junction with n well 62. See figure 7. The "junctions" are coupled to the voltage reference nodes as well as the pad and I/O devices. Applicant's arguments are unconvincing of patentability.

Arguments regarding "connectivity type" are unconvincing. First, applicant apparently intends "conductivity type". Secondly, claim 18 states that the anode is connected to "one or more regions". Two regions are not required and applicant's arguments are unconvincing.

Arguments regarding isolated voltage nodes are also unconvincing. Clearly V_A and V_C of Li are isolated voltage reference nodes. Likewise, V_{ss} and V_{dd} of Consiglio are isolated nodes.

Arguments regarding claim 27 are also unconvincing. The claim states that the two voltage nodes provide a voltage reference. Clearly V_A and V_C of Li provide a

voltage reference. Likewise Vss and Vdd of Consiglio provide a voltage reference. Because the Li and Consiglio devices provide protection below 10 volts applicant's arguments are unconvincing of patentability.

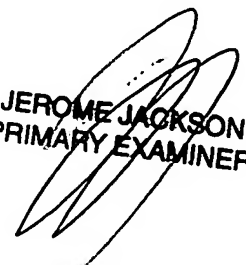
THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Jackson Jr. whose telephone number is 703 308 4937. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

jj


JEROME JACKSON
PRIMARY EXAMINER